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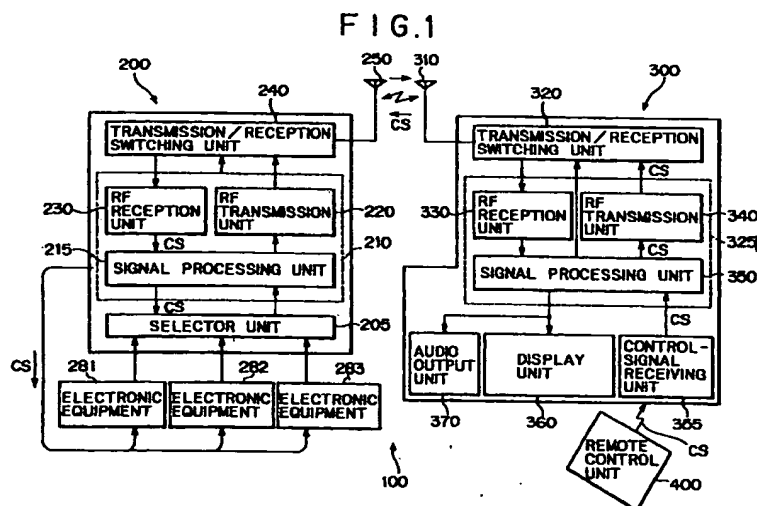
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(54) Display apparatus, signal transmitting and receiving apparatus and radio transmission apparatus

(57) A display apparatus (300) used for outputting an image and a sound based on a video signal and an audio signal from a display unit (360) and an audio output unit (370) respectively is provided with a control-signal receiving unit (355) for receiving a control signal (CS) for controlling operations of pieces of electronic equipment (281,282,283) each serving as a signal source generating the video signal and the audio signal to change the image displayed on the display unit (360) and the sound produced by the audio output unit (370). An antenna (310) receives the video signal and the

audio signal transmitted as an electric wave and transmits the control signal (CS). A control unit (325) has a function to convert the control signal (CS) received by the control-signal receiving unit (355) into a signal transmissible as an electric wave and to transmit the signal to the antenna (310), and a function to process the received video signal and the received audio signal to make the video signal and the audio signal recognizable to the display unit (360) and the audio output unit (370) respectively.



Description

[0001] The present invention relates to display apparatus, signal transmitting and receiving apparatus and radio transmission apparatus, for example in the context of a display unit such as a television receiver and a liquid-crystal display unit.

[0002] Fig. 2 of the accompanying drawings is a diagram showing the configuration of a typical radio transmission apparatus 1. The radio transmission apparatus 1 is explained by referring to Fig. 2.

[0003] As shown in Fig. 2, the radio transmission apparatus 1 comprises a signal transmitting apparatus 1A and a signal receiving apparatus 1B. The signal transmitting apparatus 1A comprises components including a signal processing unit 2, a modulation unit 3, a frequency changing unit 4, a frequency synthesizing unit 5, a power amplifier 6 and a transmission antenna 7.

[0004] The signal processing unit 2 comprises components including a buffer amplifier and a filter. The signal processing unit 2 sets the amplitudes of a video signal VS and an audio signal AS received from pieces of electronic equipment 8a to 8c at levels proper for modulation.

[0005] Examples of the pieces of electronic equipment 8a to 8c are an audio tape recorder, an optical-disc drive and a digital CS tuner, which each supply a signal VS and a signal AS to a selector unit 9. The selector unit 9 selects one of the pieces of electronic equipment 8a to 8c, passing on a video signal VS and an audio signal AS received from the selected piece of electronic equipment to the signal processing unit 2.

[0006] The modulation unit 3 modulates a carrier based on a frequency of an IF (Intermediate Frequency) signal received from the frequency synthesizing unit 5. The frequency changing unit 4 mixes the IF signal received from the modulation unit 3 with a signal with a locally generated frequency received from the frequency synthesizing unit 5 to generate an RF signal.

[0007] The power amplifier 6 amplifies the RF signal received from the frequency changing unit 4 to a signal with a prescribed power. The transmission antenna 7 has a function for transmitting the amplified RF signal to the outside world. That is, the transmission antenna 7 transmits the audio signal AS and the video signal VS, which were converted into the RF signal, to the outside world.

[0008] On the other hand, the signal receiving unit 1B comprises components including a reception antenna 10, a low-noise amplifier 11, a frequency changing unit 12, a demodulation unit 13, a frequency synthesizing unit 14 and a signal processing unit 15. The reception antenna 10 receives the RF signal from the transmission antenna 7. The low-noise amplifier 11 has a function to amplify the RF signal received by the reception antenna 10. The frequency changing unit 12 mixes the amplified RF signal with a signal having a

locally generated frequency from the frequency synthesizing unit 14 to generate an IF signal.

[0009] The demodulation unit 13 has a function to demodulate the IF signal by using a carrier with a frequency generated by the frequency synthesizing unit 14 to produce the audio signal AS and the video signal VS. The signal processing unit 15 removes noises included in the audio signal AS and the video signal VS, amplifies the signals and displays the amplified signals on a display unit 20. Examples of the display unit 20 are a television receiver and an LCD unit, which each have a function to generate a picture based on the video signal VS and to output a sound based on the audio signal AS.

[0010] Next, a typical operation of the conventional radio transmission apparatus 1 is explained by referring to Fig. 2.

[0011] First of all, the piece of electronic equipment 8a, 8b or 8c outputs the video signal VS and the audio signal AS to the selector unit 9. Then, the selector unit 9 selects one of the pieces of electronic equipment 8a to 8c, passing on the video signal VS and the audio signal AS received from the selected piece of electronic equipment to the signal processing unit 2. The video signal VS and the audio signal AS are processed by the signal processing unit 2, the modulation unit 3 and the frequency changing unit 4, being converted into an RF signal, which is then amplified by the power amplifier 6 before being output as an electric wave from the transmission antenna 7.

[0012] The RF signal is received by the reception antenna 10 and processed by the low-noise amplifier 11, the frequency changing unit 12 and the demodulation unit 13, being demodulated into the VS signal and AS signal. Then, the VS signal and the AS signal are supplied to the display unit 20, being output as an image and a sound respectively.

[0013] In the radio transmission apparatus 1 shown in Fig. 2, to change an image and a sound output by the signal processing unit 20, it is necessary to carry out predetermined operations on the piece of electronic equipment 8a, 8b or 8c. In addition, if the signal transmitting apparatus 1A, the signal receiving apparatus 1B and the pieces of electronic equipment 8a to 8c are placed at locations separated from each other, there will be raised a problem of a need to operate the signal receiving apparatus 1B and the pieces of electronic equipment 8a to 8c frequently. To put it concretely, assume that the signal transmitting apparatus 1A and the signal receiving apparatus 1B are placed at different rooms. A problem encountered in this case is that it is difficult to operate the pieces of electronic equipment 8a to 8c and the selector unit 9 by using an infrared remote controller from the room in which the signal receiving apparatus 1B is placed.

[0014] In particular, to operate the pieces of electronic equipment 8a to 8c and the signal receiving apparatus 1B by using an infrared remote controller, operations must be carried out by orientating the infra-

red remote controller to the piece of electronic equipment 8a, 8b or 8c, or the signal receiving apparatus 1B due to directivity of an infrared ray generated by the remote controller. Thus, there is also encountered a problem of cumbersome operations, which must be carried out by orientating the infrared remote controller to the piece of electronic equipment 8a, 8b or 8c, or the signal receiving apparatus 1B.

[0015] In addition, if the display apparatus 20 is installed at a location different from that of the signal receiving apparatus 1B, the number of cables connecting the display apparatus 20 to the signal receiving apparatus 1B will increase, raising a problem of cabling complexity.

[0016] It is thus an aim of at least an embodiment of the present invention addressing the problems described above to provide a display apparatus, a display control apparatus and a radio transmission apparatus that are capable of improving the user interface.

[0017] According to one aspect of the invention there is provided a display apparatus for outputting an image and a sound based on a video signal and an audio signal from a display unit and an audio output unit respectively, said display apparatus is characterized by comprising:

a control-signal receiving unit for receiving a control signal for controlling an operation of electronic equipment serving as a signal source generating said video signal and said audio signal to change said image displayed on said display unit and said sound produced by said audio output unit;

an antenna for receiving said video signal and said audio signal transmitted as an electric wave and for transmitting said control signal; and

a control unit having a function to convert said control signal received by said control-signal receiving unit into a signal transmissible as an electric wave and to transmit said signal to said antenna and a function to process said received video signal and said received audio signal to make said video signal and said audio signal recognizable by said display unit and said audio output unit respectively.

[0018] In accordance with such a configuration, a video signal and an audio signal received by an antenna may be subjected to signal processing in a control unit to output an image and a sound to a display unit and an audio output unit respectively. At the same time, to control the operation of electronic equipment serving as a source generating the video signal and the audio signal, an antenna transmits a control signal received by a control-signal receiving unit.

[0019] Thus, to control the operation of the electronic equipment and the operation of the display apparatus, it is necessary to transmit a control signal to the

control-signal receiving unit only and unnecessary to operate the electronic equipment.

[0020] According to another aspect of the invention there is provided a signal transmitting and receiving apparatus comprising:

a control unit for converting a video signal and an audio signal received from electronic equipment into signals transmissible as an electric wave; and

an antenna for transmitting said transmissible video signal and said transmissible audio signal as said electric wave; wherein:

said antenna has a function to receive a control signal for controlling an operation of said electronic equipment; and

said control unit has a function to control said operation of said electronic equipment in accordance with said control signal received from said antenna.

[0021] A control unit may process a video signal and an audio signal received from electronic equipment and an antenna transmits the processed video and audio signals. The antenna receives a control signal, supplying the signal to the control unit. The control unit controls the operation of the electronic equipment in accordance with the control signal received from the antenna.

[0022] In this way, control of the operation of the electronic equipment based on a control signal makes it unnecessary to operate the electronic equipment directly. In particular, if a plurality of pieces of electronic equipment exists, the control unit is capable of executing control of the pieces of electronic equipment in a centralized manner.

[0023] According to a further aspect of the invention there is provided a radio transmission apparatus comprising:

a signal transmitting and receiving apparatus for transmitting a video signal and an audio signal generated by the electronic equipment as an electric wave; and

a display apparatus for receiving said video signal and said audio signal and outputting an image and a sound based on said video signal and said audio signal respectively,

said radio transmission apparatus being characterized in that:

said display apparatus has functions to receive a control signal for changing said image or said sound as well as to transmit said control signal as

an electric wave, whereas

said signal transmitting and receiving apparatus has a function to receive said control signal and to control an operation of said electronic equipment on the basis of said control signal.

[0024] In accordance with such a configuration, a display apparatus may receive a video signal and an audio signal generated by electronic equipment and transmitted by a signal transmitting and receiving apparatus. Then, the display apparatus outputs an image and a sound based on the video signal and the audio signal respectively. In control of the operation of the electronic equipment, which serves as a source generating the video and the audio signals, on the other hand, first of all, a control signal is transmitted to the display apparatus. Then, the display apparatus passes on the control signal to the signal transmitting and receiving apparatus. Subsequently, the signal transmitting and receiving apparatus controls the electronic equipment on the basis of the control signal. By establishing a duplex communication between the signal transmitting and receiving apparatus and the display apparatus as described above, it is possible to control the operation of the display apparatus and the operation of the electronic equipment by using only the display apparatus.

[0025] The invention will now be described by way of example with reference to the accompanying drawings, throughout which like parts are referred to by like references, and in which:

Fig. 1 is a diagram showing the configuration of a preferred embodiment implementing a radio transmission apparatus provided by the present invention; and

Fig. 2 is a diagram showing the configuration of a typical known radio transmission apparatus.

[0026] It should be noted that, since the embodiment described below is a preferred embodiment of the present invention, a variety of technologically preferred restrictions are imposed. However, the scope of the present invention is not limited to the embodiment as long as a description limiting the present invention is not given in particular.

[0027] Fig. 1 is an explanatory diagram showing the configuration of a preferred embodiment implementing a radio transmission apparatus provided by the present invention. The radio transmission apparatus 100 is explained by referring to Fig. 1 as follows.

[0028] The radio transmission apparatus 100 shown in Fig. 1 comprises a signal transmitting and receiving apparatus 200 and a display apparatus 300. The signal transmitting and receiving apparatus 200 comprises components including a selector unit 205, a control unit 210, a transmission / reception switching

unit 240 and an antenna 250.

[0029] The selector unit 205 has a plurality of input terminals, which are connected to pieces of electronic equipment 281, 282 and 283 respectively. Examples of the pieces of electronic equipment 281, 282 and 283 are an audio tape recorder, an optical-disc drive and a digital CS tuner, which each supply a video signal VS and an audio signal AS to a selector unit 205. The video signal VS and the audio signal AS are also referred to as an AV (Audio Visual) signal. The selector unit 205 selects one of the pieces of electronic equipment 281, 282 and 283, passing on the AV signal received from the selected piece of electronic equipment to the control unit 210.

[0030] The control unit 210 has a function to control the operations of the selector unit 205 and the transmission / reception switching unit 240 as well as a function to control the operations of the pieces of electronic equipment 281, 282 and 283 on the basis of a control signal CS to be described later.

[0031] In addition, the control unit 210 includes a signal processing unit 215, an RF transmission unit 220 and an RF reception unit 230. The signal processing unit 215 modulates the video signal VS and the audio signal AS received thereby to generate an RF signal converted into an appropriate amplitude. That is, the control unit 210 converts the video signal VS and the audio signal AS into RF signal, which can be transmitted as an electric wave.

[0032] The RF transmission unit 220 comprises components including a modulator for modulating a carrier with the video signal VS and the audio signal AS, a frequency changer as well as a local oscillator, which are used for carrying out frequency conversion to generate a high-frequency signal, a PLL circuit, a transmission filter and a power amplifier. The RF transmission unit 220 has a function to modulate an RF signal received from the signal processing unit 215, amplify the modulated signal and output the amplified signal.

[0033] The RF reception unit 230 comprises components including a low-noise amplifier, a reception filter, a frequency converter, a local oscillator and a PLL circuit. The RF reception unit 230 has a function to demodulate a control signal CS received from the antenna 250.

[0034] The transmission / reception switching unit 240 supplies the RF signal received from the RF transmission unit 220 to the antenna 250 and supplies the control signal CS received from the antenna 250 to the RF reception unit 230.

[0035] The antenna 250 has functions to transmit the modulated RF signal as an electric wave and receive the control signal CS coming as an electric wave.

[0036] A typical operation of the signal transmitting and receiving apparatus 200 is explained by referring to Fig. 1.

[0037] First of all, the selector unit 205 selects one

of the pieces of electronic equipment 281, 282 and 283, passing on a video signal VS and an audio signal AS received from the selected piece of electronic equipment to the signal processing unit 215 by way of the selector unit 205, which converts the video signal VS and the audio signal AS into an RF signal. Then, the RF transmission unit 220 converts the RF signal into a high-frequency signal, which is supplied to the antenna 250 by way of the transmission / reception switching unit 240.

[0038] On the other hand, the antenna 250 receives a control signal CS arriving as an electric wave and supplies the control signal CS to the RF reception unit 230 by way of the transmission / reception switching unit 240. After being subjected to frequency conversion in the RF reception unit 230, the control signal CS is supplied to the signal processing unit 215. In this way, the control unit 210 controls the operations of the pieces of electronic equipment 281, 282 and 283 in accordance with the control signal CS.

[0039] In addition to transmission of a video signal VS and an audio signal AS, the signal transmitting and receiving apparatus 200 shown in Fig. 1 also receives a control signal CS and controls the operations of the pieces of electronic equipment 281, 282 and 283 in accordance with the control signal CS. In this way, the pieces of electronic equipment 281, 282 and 283 are controlled remotely and in a centralized manner.

[0040] Next, the display apparatus 300 is explained by referring to Fig. 1.

[0041] The display apparatus 300 shown in Fig. 1 comprises components including an antenna 310, a transmission / reception switching unit 320, a control unit 325, a display unit 360 and an audio output unit 370. The antenna 310 has a function to receive a video signal VS and an audio signal AS which are an RF signal transmitted as an electric wave. The antenna 310 also has a function to transmit a control signal CS.

[0042] The transmission / reception switching unit 320 switches the display apparatus 300 from a reception mode to a transmission mode and vice versa. In the reception mode, the antenna 310 receives a video signal VS and an audio signal AS. In the transmission mode, on the other hand, the antenna 310 transmits a control signal CS.

[0043] Provided with a function to control the operation of the transmission / reception switching unit 320, the control unit 325 comprises components including an RF transmission unit 340, an RF reception unit 330 and a signal processing unit 350.

[0044] The RF reception unit 330 comprises components including a low-noise filter, a reception filter, a frequency converter, a local oscillator and a PLL circuit. The RF reception unit 330 has a function to demodulate a video signal VS and an audio signal AS received by the antenna 310.

[0045] The RF transmission unit 340 comprises components including a modulator for modulating a carrier with the control signal CS, a frequency changer as well as a local oscillator, which are used for carrying out frequency conversion to generate a high-frequency signal, a PLL circuit, a transmission filter and a power amplifier. The RF transmission unit 340 has a function to modulate the CS signal received from the signal processing unit 350, amplify the modulated signal and output the amplified signal.

[0046] The signal processing unit 350 has functions to filter the video signal VS and the audio signal AS as well as to change their formats, and output the filtered and reformatted signals to the display unit 360. The signal processing unit 350 also receives the control signal CS transmitted by a remote control unit 400 by way of an optical receiver 355, which serves as a control-signal reception unit for receiving the control signal CS. The signal processing unit 350 also has a function to modulate the received control signal CS and converts the modulated control signal CS into an RF signal having a proper amplitude.

[0047] That is, the control unit 325 has a function to convert the control signal CS into an RF signal that can be transmitted as an electric wave. In addition, the control unit 325 also has a function to convert the video signal VS and the audio signal AS, which are received as an RF signal, into signals recognizable by the display unit 360 and the audio output unit 370 respectively.

[0048] Implemented by typically a thin display unit such as a liquid-crystal display unit, a plasma display unit or a TFT display unit, the display unit 360 has a function to output an image based on the video signal VS.

[0049] The audio output unit 370 is typically a speaker provided inside or outside the display apparatus 300 for outputting a sound based on the audio signal AS.

[0050] Next, a typical operation of the display apparatus 300 is explained by referring to Fig. 1.

[0051] First of all, the antenna 310 receives a video signal VS and an audio signal AS, which are transmitted as an electric wave of an RF signal, and supplies the video signal VS and the audio signal AS to the RF reception unit 330 by way of the transmission / reception switching unit 320. The RF signal is then demodulated into a video signal VS and an audio signal AS before being supplied to the signal processing unit 350. The signal processing unit 350 changes the formats of the video signal VS and the audio signal AS to predetermined formats before supplying the video signal VS to the display unit 360 and the audio signal AS to the audio output unit 370. The display unit 360 outputs an image based on the video signal VS and the audio output unit 370 outputs a sound based on the audio signal AS.

[0052] When the user operates the frequency changing unit 400, the frequency changing unit 400 transmits a control signal CS to the control-signal reception unit 355. The control signal CS is then converted into an RF signal in the signal processing unit 350 and

the RF transmission unit 340. Then, the control signal CS converted into the RF signal is supplied to the antenna 310 by way of the transmission / reception switching unit 320. Finally, the antenna 310 transmits the RF signal to the outside world as an electric wave.

[0053] In accordance with the display apparatus shown in Fig. 1, a control signal CS including control information for the pieces of electronic equipment 281, 282 and 283 is received by the display apparatus 300 and then transmitted by the antenna 310, making the pieces of electronic equipment 281, 282 and 283 easy to operate. That is, the user needs merely to operate the frequency changing unit 400 to transmit the control signal to the display apparatus 300 only. In this way, it is possible to control the display apparatus 300 and the pieces of electronic equipment 281, 282 and 283 in a centralized manner, allowing the user interface to be improved.

[0054] In addition, in the radio transmission apparatus 100 shown in Fig. 1, the signal transmitting and receiving apparatus 200 transmits a video signal VS and an audio signal AS as an electric wave to the display apparatus 300. On the other hand, the display apparatus 300 transmits a control signal CS to the signal transmitting and receiving apparatus 200 as an electric wave.

[0055] The signal transmitting and receiving apparatus 200 controls the operations of the pieces of electronic equipment 281, 282 and 283 on the basis of the received control signal CS to adjust the video signal VS and the audio signal AS which is transmitted to the display apparatus 300. On the other hand, the display apparatus 300 outputs an image and a sound based on the received video signal VS and the received audio signal AS respectively.

[0056] In accordance with the embodiment described above, a video signal VS and an audio signal AS are transmitted from the signal transmitting and receiving apparatus 200 to the display apparatus 300 while a control signal CS is transmitted from the display apparatus 300 to the signal transmitting and receiving apparatus 200. By controlling the display unit 360 and the pieces of electronic equipment 281, 282 and 283, the user interface can be improved. To put it concretely, assume that the pieces of electronic equipment 281, 282 and 283 connected to the signal transmitting and receiving apparatus 200 are placed at locations separated from a room in which the display apparatus 300 is located. In this case, the pieces of electronic equipment 281, 282 and 283 cannot probably be operated directly by using the frequency changing unit 400. With the configuration provided by the present invention, however, the user is capable of operating the pieces of electronic equipment 281, 282 and 283 through operations of the frequency changing unit 400 by orienting the frequency changing unit 400 toward the display apparatus 300.

[0057] In addition, since duplex communication between the signal transmitting and receiving apparatus

200 and the display apparatus 300 is possible, the types of the pieces of equipment 281, 282 to 283 connected to the signal transmitting and receiving apparatus 200 can be displayed on the display apparatus 300. Thus, control and operations of the pieces of equipment 281, 282 to 283 can be managed in a centralized manner by using typically a menu screen of the display apparatus 300. As a result, the user interface can be improved.

[0058] In addition, the selector unit 205 is incorporated in the signal transmitting and receiving apparatus 200 whereas a function to receive an AV signal is provided in the display apparatus 300. Therefore, the number of cords is small and wiring is well organized. Moreover, since the function to receive an AV signal is embedded in a wall-mounted television or an LCD television, there is no problem of a lack of installation space and the scene looks good.

[0059] Embodiments of the present invention are not limited to the embodiment described above.

[0060] For example, while only 3 pieces of electronic equipment 281, 282 and 283 are connected to the selector unit 205 in the embodiment shown in Fig. 1, 2 or more, in fact, any number of pieces of electronic equipment can be connected.

[0061] In addition, while an audio tape recorder, an optical-disc drive and a digital CS tuner are cited as examples of the pieces of electronic equipment 281, 282 and 283 shown in Fig. 1, it is possible to use any electronic equipment outputting a video signal and an audio signal such as an apparatus for developing software like the so-called MPEG data and an electronic computer.

[0062] As described above, it is possible to provide a display apparatus, a display control apparatus and a radio transmission apparatus that are capable of improving the user interface.

Claims

1. A display apparatus for outputting a signal generated by electronic equipment serving as a source generating said signal, said display apparatus comprising:

a control-signal receiving unit for receiving a control signal for controlling an operation of said electronic equipment;
an antenna for receiving said signal transmitted by said electronic equipment as an electric wave and transmitting said control signal; and
a control unit having a function to convert said control signal received by said control-signal receiving unit into a control signal transmissible as an electric wave and supply said transmissible control signal to said antenna and a function to carry out signal processing for outputting said signal received from said electronic equipment.

2. A display apparatus according to claim 1 wherein said signal generated by said electronic equipment is a video signal or an audio signal.
3. A display apparatus according to claim 1 wherein: 5
 said electronic equipment comprises a plurality of pieces of equipment; and
 said control signal for controlling said operation of said electronic equipment includes a signal for selecting a piece of equipment to be controlled from said pieces of equipment. 10
4. A signal transmitting and receiving apparatus comprising: 15
 a control unit for converting a signal generated by electronic equipment into a signal transmissible as an electric wave; and
 an antenna for transmitting said transmissible signal generated by said control unit as an electric wave, 20
 wherein:
 said antenna has a function to receive a control signal for controlling an operation of said electronic equipment; and 25
 said control unit has a function to control said operation of said electronic equipment in accordance with said control signal received by said antenna.
5. A signal transmitting and receiving apparatus according to claim 4 wherein said signal generated by said electronic equipment is a video signal or an audio signal. 35
6. A signal transmitting and receiving apparatus according to claim 4 wherein:
 said electronic equipment comprises a plurality of pieces of equipment; and
 said control signal for controlling said operation of said electronic equipment includes a signal for selecting a piece of equipment to be controlled from said pieces of equipment. 40
7. A signal transmitting and receiving apparatus according to claim 4 wherein:
 said electronic equipment comprises a plurality of pieces of equipment; 50
 said control unit inputs a specific signal through a select unit; and
 said specific signal is selected by said select unit among signals output by said pieces of equipment. 55
8. A signal transmitting and receiving apparatus according to claim 7 wherein said selector unit selects said specific signal among said signals output by said pieces of equipment in accordance with said control signal for controlling said operation of said electronic equipment.
9. A radio transmission apparatus comprising:
 a signal transmitting and receiving apparatus for transmitting a signal generated by electronic equipment as an electric wave; and
 a display apparatus for receiving and displaying said signal, wherein:
 said display apparatus has a function to receive a control signal for controlling an operation of said electronic equipment and a function to transmit said control signal as an electric wave; and
 said signal transmitting and receiving apparatus has a function to receive said control signal transmitted as said electric wave and a function to control said operation of said electronic equipment in accordance with said control signal.
10. A radio transmission apparatus according to claim 9 wherein said signal generated by said electronic equipment is a video signal or an audio signal.
11. A radio transmission apparatus according to claim 9 wherein:
 said electronic equipment comprises a plurality of pieces of equipment; and
 said control signal for controlling said operation of said electronic equipment includes a signal for selecting a piece of equipment to be controlled from said pieces of equipment.
12. A signal transmitting and receiving method comprising the steps of:
 converting a signal generated by electronic equipment into a signal transmissible as an electric wave;
 transmitting said transmissible signal through an antenna as an electric wave,
 receiving a control signal for controlling an operation of said electronic equipment through said antenna; and
 controlling said operation of said electronic equipment in accordance with said control signal received by said antenna.
13. A signal transmitting and receiving method according to claim 12 wherein said signal generated by said electronic equipment is a video signal or an audio signal.

14. A signal transmitting and receiving method according to claim 12 wherein:

said electronic equipment comprises a plurality
of pieces of equipment; and
said control signal for controlling said operation
of said electronic equipment includes a signal
for selecting a piece of equipment to be controlled
from said pieces of equipment.

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15. A signal transmitting and receiving method according to claim 12 wherein:

said electronic equipment comprises a plurality
of pieces of equipment; and
a specific signal is selected among signals output
by said pieces of equipment.

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16. A signal transmitting and receiving method according to claim 15 whereby said specific signal is
selected among said signals output by said pieces
of equipment in accordance with said control signal
for controlling said operation of said electronic
equipment.

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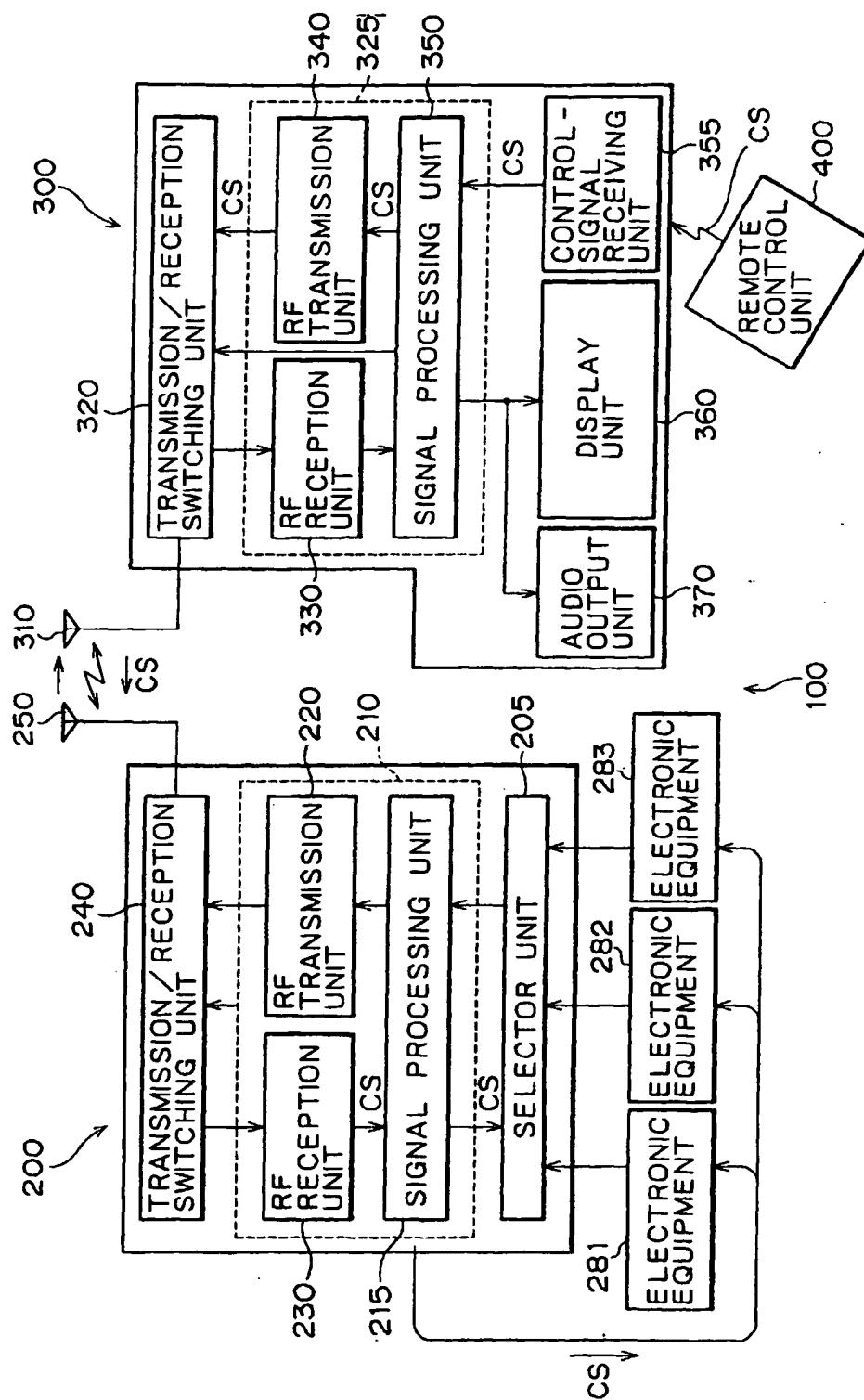


FIG. 2

